STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0125164; AI 145509; PER20100001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. **THE APPLICANT IS:** Livingston Parish, Department of Public Works
Juban Parc WWTP
28325 Charlie Watts Road
Livingston, LA 70754

II. **PREPARED BY:** Rachel Davis

DATE PREPARED: April 27, 2010

III. **PERMIT ACTION:** revoke LPDES permit LAG570423 and issue LPDES permit LA0125164, AI 145509; PER20100001

LPDES application received: December 8, 2009

LPDES General Permit LAG570423 permit issued: September 18, 2009
LPDES General Permit LAG570423 permit expires: April 30, 2014

IV. **FACILITY INFORMATION:**

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Juban Parc Subdivision and two schools.

B. The permit application does not indicate the receipt of industrial wastewater.

C. The facility is located north of Brown Road in Denham Springs, Livingston Parish.

D. The treatment facility consists of an extended aeration sewage treatment plant with a filter bed, reused chlorine contact chamber, and post aeration basin.

E. Outfall 001

Discharge Location: Latitude 30° 25' 39" North
Longitude 90° 53' 56" West

Description: treated sanitary wastewater

Expected Flow: 157 homes x 400 GPD = 0.0628 MGD
1850 students/employees x 20 GPD = 0.037 MGD

Total Expected Flow: 0.0996 MGD

Calculations for gallons per day were based upon figures obtained from Chapter 15 of the State of Louisiana Sanitary Code, Department of Health and Hospitals, Office of Public Health.

*Current design capacity of the sewage treatment plant is 75,000 GPD. According to the application, the STP will be expanded to account for the additional flow.

Type of Flow Measurement which the facility is currently using:
Bucket and Stopwatch

V. RECEIVING WATERS:

The discharge is into a series of stormwater ponds, thence into the West Colyell Creek in subsegment 040305 of the Lake Pontchartrain Basin.

The designated uses and degree of support for Segment 040305 of the Lake Pontchartrain Basin are as indicated in the table below[1/]:

Degree of Support of Each Use						
Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Not Supported	Full	Not Supported	N/A	N/A	N/A	N/A

[1/]The designated uses and degree of support for Segment 040305 of the Lake Pontchartrain Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 040305 of the Lake Pontchartrain Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the gulf sturgeon which is listed as threatened/endangered species. No consultation is needed, as instructed in the January 5, 2010 letter from Rieck (FWS) to Nolan (LDEQ), since the facility does not fall into one of the categories defined in Section II.2 of the letter. LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse affect upon the gulf sturgeon since effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Rachel Davis
Water Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 040305, Colyell Creek System, is listed on LDEQ's Final 2006 303(d) List as impaired for nutrients (nitate/nitrite+N), organic enrichment/low DO, pathogen indicators, phosphorus, and mercury. To date no TMDLs have been completed for this waterbody. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by a TMDL.

Nutrients (Nitate/Nitrite+N), Organic Enrichment/Low DO and Phosphorus

In accordance with a letter dated January 6, 2003, signed by Mr. Jack Ferguson of the US EPA to Region 6 State Program Managers, EPA considers facilities treating domestic sewage and designed to meet effluent limitations of 5/5/2/5 BOD_5/TSS/NH_3-N/DO, as meeting end-of-pipe water quality criteria for dissolved oxygen. The letter goes on to further state that a discharge meeting these effluent limits would maintain the minimum dissolved oxygen standard of 5 mg/L and therefore would not cause or contribute to the violation of water quality standards. Also, LDEQ's position regarding water quality criteria for nutrients, is that when oxygen-demanding substances are controlled and limited in order to ensure that the dissolved oxygen criterion is supported, nutrients are also controlled and limited. *See In The Matter of Sierra Club and Louisiana Environmental Network Request for Nutrient Limits.* Docket No. AHD-DR-96001. LDEQ April 29, 1996.

Mercury

The mercury impairment listed for subsegment 040305 applies only to those waterbodies specifically identified in LDEQ's Final 2006 Integrated Report, and not to the entire subsegment unless so specified. Because the discharge from this facility is not directly into the Colyell Creek system, mercury will not be addressed in the permit.

Pathogen Indicators

To protect the receiving waterbody against high levels of pathogenic organisms, fecal coliform limitations have been established in the permit.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$	4.15	5 mg/l	10 mg/l	Best Professional Judgement (BPJ) based on the letter from Ferguson (EPA) to Region 6 Program. Managers dated 1/06/03
TSS	4.15	5 mg/l	10 mg/l	Best Professional Judgement (BPJ) based on the letter from Ferguson (EPA) to Region 6 Program. Managers dated 1/06/03
Ammonia-Nitrogen	1.66	2 mg/l	4 mg/l	Best Professional Judgement (BPJ) based on the letter from Ferguson (EPA) to Region 6 Program. Managers dated 1/06/03
Dissolved Oxygen*	---	5.0 mg/l	N/A	Best Professional Judgement (BPJ) based on the letter from Ferguson (EPA) to Region 6 Program. Managers dated 1/06/03

*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) pH

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

X. PREVIOUS PERMITS:

LPDES Permit No. LAG570423: Issued: September 18, 2009
Expires: April 30, 2014

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Flow	Report	Report	1/week	Measure
$CBOD_5$	10 mg/l	15 mg/l	1/month	Grab
TSS	15 mg/l	23 mg/l	1/month	Grab
Ammonia-Nitrogen	5 mg/l	10 mg/l	1/month	Grab
Dissolved Oxygen	5.0 mg/l	---	1/month	Grab
Fecal Coliform Colonies	200	400	1/month	Grab
pH	6.0 (min)	9.0 (max)	1/month	Grab

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

Date: November 20, 2008
Inspector: Daron Suggs
EDMS Document No.: 40534078
Findings and/or Violations:

1. DMR Review revealed a fecal coliform exceedance in July 08 and a TSS excursion in August 08
2. Treatment unit was not operating properly at the time of the inspection. The aeration basin was lacking activated sludge and was dark grey in color. Entire treatment unit had a rotten egg odor.
3. Blowers were not being used. Electric meter was reading zero.
4. Chlorine contact chamber had no chlorine in it.
5. Sample was taken to be analyzed for BOD_5 revealed a result of 15 mg/l.
6. Unit was underloaded and has only 5 houses currently hooked to it. In the future two schools and more development in the subdivision will feed this plant.

Based on this information the surveillance division referred this facility to the Enforcement Division on December 1, 2008.

B) Compliance and/or Administrative Orders

A review of the files indicates that no compliance orders have been issued against the facility.

C) **DMR Review**

A review of the discharge monitoring reports for the period beginning **July 2008** through **December 2009** has revealed the following violations:

Period of Excursion	Parameter	Outfall	Permit Limit	Reported Quantity
July 2008	Fecal	001	200	500
	Fecal		400	500
October 2008	CBOD	001	10 mg/l	29.7 mg/l
	CBOD		15 mg/l	29.7 mg/l
	Fecal		200	2000
	Fecal		400	2000
	Ammonia		2 mg/l	6.2 mg/l
	Ammonia		4 mg/l	6.2 mg/l
November 2008	Ammonia	001	2 mg/l	5.7 mg/l
	Ammonia		4 mg/l	5.7 mg/l
December 2008	CBOD	001	10 mg/l	75.8 mg/l
	CBOD		15 mg/l	75.8 mg/l
	TSS		15 mg/l	23.3 mg/l
	Ammonia		2 mg/l	23.2 mg/l
	Ammonia		4 mg/l	23.2 mg/l
January 2009	Ammonia	001	2 mg/l	11.9 mg/l
	Ammonia		4 mg/l	11.9 mg/l
February 2009	Fecal	001	200	1020
	Fecal		400	1020
	Ammonia		2 mg/l	8.13 mg/l
	Ammonia		4 mg/l	8.13 mg/l
April 2009	Ammonia	001	2 mg/l	9.49 mg/l
	Ammonia		4 mg/l	9.49 mg/l
June 2009	CBOD	001	10 mg/l	11.6 mg/l
	TSS		15 mg/l	28.3 mg/l
	TSS		23 mg/l	28.3 mg/l
	Fecal		200	1180
	Fecal		400	1180
September 2009	Fecal	001	200	520
	Fecal		400	520
	Ammonia		2 mg/l	6.8 mg/l
	Ammonia		4 mg/l	6.8 mg/l
December 2009	CBOD	001	10 mg/l	102 mg/l
	CBOD		15 mg/l	102 mg/l
	TSS		15 mg/l	35 mg/l
	TSS		23 mg/l	35 mg/l
	Ammonia		2 mg/l	13 mg/l
	Ammonia		4 mg/l	13 mg/l

XII. ADDITIONAL INFORMATION:

The agency requested that Livingston Parish submit answers to the Environmental Impact Questionnaire because of the discharge route of the facility. The document was received on March 18, 2010 (EDMS Doc ID# 46610858). The responses have been reviewed by the agency and have been determined to fulfill the environmental assessment requirement. The answers to those questions are summarized below.

1. Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?

   Two potential water quality impacts that were identified are effluent and stormwater. Juban Parc is upgrading their system to provide tertiary treatment of its effluent to meet 5/5/2/5 limitations. This ensures that the effluent coming from the WWTP receives the best feasible biological, chemical, and mechanical treatment prior to discharge. The effluent will also travel through a series of stormwater ponds prior to discharge reducing water quality impacts further.

   Stormwater also has the potiential to adversely affect the water quality. Juban Parc will require the use of best management practices (BMPs) and to develop a stormwater pollution prevention plan (SWPPP) in accordance with the construction general permit requirements.

2. Does a cost benefit analysis of the environmental-impact cost balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

   Controlled fugitive emissions, low-level noise, stormwater run-off, and changes in aesthetic quality of the surroundings are some of the small negative impacts that the WWTP would have on the environment surrounding the plant. The positive effects play a greater role in impacting the environment, the WWTP would decrease the biochemical effect of the effluent on West Colyell Creek and it would contribute to early compliance with future TMDL standards.

   The social impacts of the WWTP would aid in the growth of the Juban Parc community and allow residents to terminate the use of small package plants. This would allow tertiary treatment to a greater volume of effluent rather than just secondary treatment. In the long term this WWTP could also be the building blocks for the parish to incorporate centralized waste treatment systems. Economical this new WWTP will allow it to perform more cost effectively. By having the sewer bill tied into the water bill it allows an enforcement of proper bill payment therefore providing an acceptable return on investment.

3. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing nonenvironmental benefits?

   Other alternative projects do exist for treating the effluent from Juban Parc. Engineers have come up with three alternatives taking into consideration funding, site and permitting constraints. These options include expanding the existing WWTP using identical technology, expanding the existing WWTP using new technology, and replacing existing WWTP with new technology. Of the three, expanding the existing WWTP using new technology has the best combination of cost efficiency and performance as well as a reduction in overall environmental impact, aiding compliance with future discharge regulations promulgated by TMDL requirements and favorable socioeconomic impacts.

4. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing nonenvironmental benefits?

   The existing WWTP site is an ideal location for maintaining wastewater treatment service due to its proximity to its customers while still having ample separation to avoid encroachment. A new site could cause significantly more negative environmental and social economic impacts than the proposed WWTP. The infrastructure of the plant is also already in place and moving it would cause a significant cost.

5. Are there mitigating measures which would offer more protection to the environmental than the facility as proposed without unduly curtailing nonenvironmental benefits?

The WWTP has developed many mitigating measures to ensure the highest feasible level of environmental protection. Some of these measures are using existing site for improvements, sufficient separation between the WWTP and schools and subdivision, advanced biological nutrients removal (BNR), discharging effluent to stormwater ponds, increasing the retention time, and eliminating exposure to untreated wastewater from individual septic tanks. For these and other reasons, the proposed WWTP improvements provide the maximum feasible environmental protection possible under these circumstances.

Reopener Clause

This permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act or more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs, if the effluent standard, limitations, water quality studies or TMDL's so issued or approved:

a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

b) Controls any pollutant not limited in the permit; or

c) Requires reassessment due to change in 303(d) status of waterbody; or

d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

Monitoring Frequency Requirements

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** shall be as follows:

Effluent Characteristics	Monitoring Requirements	
	Measurement Frequency	Sample Type
Flow	Continuous	Recorder
$CBOD_5$	1/month	Grab
Total Suspended Solids	1/month	Grab
Ammonia-Nitrogen	1/month	Grab
Dissolved Oxygen	1/month	Grab
Fecal Coliform Bacteria	1/month	Grab
pH	1/month	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, it is recommended that LDEQ Option 1 Pretreatment Language be included in LPDES Permit LA0125164.

This language is established for municipalities that do not have either an approved or required Pretreatment program. This recommendation is in accordance with 40 CFR Part 403 regulations, the General Pretreatment Regulations for Existing and New Sources of Pollution contained in LAC Title 33, Part IX, Chapter 61 and the Best Professional Judgement (BPJ) of the reviewer.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.

The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

XIII. TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to issue a permit for the discharge described in this Statement of Basis.

XIV. REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2009.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 2006.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2010.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2010.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Livingston Parish, Department of Public Works, Juban Parc WWTP, December 8, 2009.